

Abstract of the Invention

Methods are provided for determining the silhouette of an object in an image against a fairly plain background. The method performs initial processing to create small regions of
5 pixels in the image that have the same grey level value. Modifying the grey level values in these regions by setting the grey level value equal to the number of pixels in the region and then performing a threshold operation aids in defining a coarse boundary of the object. Analyzing grey level values of
10 pixels in the image external to the object defines the coarse boundary. Analyzing grey level values of pixels in the image internal to the object defines the silhouette. Additional processing steps in the method help to further define the silhouette. Steps of the method can be repeated to further
15 refine the shape of the silhouette. The invention does not require the detection of edges, in fact it is considered to be independent of the original grey level values of pixels in the image being processed. Consequently, the invention is immune to the grey level values or textures of the object for which the
20 silhouette is being determined or the background, and also immune to the camera and lighting setups. It works well for determining the silhouette even when the grey level value at an edge of the object is very close to that of the background.